



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Siegfried RUTHARDT et al

Serial No. 09/844,273

Filed: April 30, 2001

For: Common Rail Injector

Examiner: D. Gorman

Art Unit: 3752

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IDS STATEMENT UNDER 37 CFR 1.97(b) and
STATEMENT OF RELEVANCE OF THE CITED PRIOR ART

Commissioner for Patents
Washington, DC 20231

Sir:

The undersigned hereby requests consideration of the prior art cited on the attached prior art statement.

The citation of this art is after the restriction requirement, but prior to the first Office action on the merits. This the citation of this prior art qualifies under 37 CFR 1.97(b).

However, if any fees should become necessary for this application, the Commissioner is authorized to charge such to Deposit Account Number 07-2100.

The relevance of the prior art cited on the attached form 1449 is as follows:

DE 39 37 955, Publication date: May 16, 1991

The injection nozzle has a body, with a movable injector needle. The body is clamped to a nozzle holder, with a chamber for a closing spring. This acts on the needle via a central pressure bolt, which passes through a second closing spring. The spring end away from the needle supports itself on a housing-fastened shoulder.

The spring chamber (26) in the nozzle holder (18) is long enough to accommodate one closing spring (30) only. The second spring (50) is located in an intermediate section (14), which is clamped between the nozzle holder and the nozzle body (10), resp. an intermediate disc (12).

DE 19 634 105, Publication date: January 15, 1998

The injection valve has a nozzle housing 1 with an inlet passage 2 connected to a high pressure common rail; a branch passage 2a is connected to a control space 4. The pressure in the control space 4 acts on a control piston 3 which exerts force on the rear end of the nozzle needle shank 10. The control space is also connectible to a pressure relief line 8 by the opening of a pressure relief valve 7 actuated by electromagnet 9. The control piston 3 has a bore 16 enclosing a closing spring 17. If there is pressure in the inlet 2,2a, the control piston and the nozzle needle shank 10 contact each other directly so that the closing spring 17 is bypassed; the closing spring 17 comes into action only when the system is at rest, the service life of the spring 17 is thus extended. In modifications (figs.2,3) the spring is guided by a pin (fig.2) or a sleeve (fig.3) which acts as a spacer between the control piston 3 and the nozzle needle shank 10

DE 19 825 171, Publication date: July 1, 1999

A valve closure mechanism (8-15) activates the valve needle (2) in the closure direction. Surrounding the valve needle is an injection volume (24), to which fuel to be injected is fed at high pressure via a high pressure channel. When a

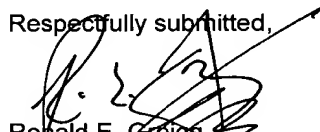
predetermined pressure in the injection volume is exceeded the valve needle is pushed in the opening direction against the force of the closure mechanism. An adjustment device (17, 18) reduces the force of the valve closure mechanism for the start process of the engine and a control device (30) governs the time duration during which the force of the valve closure mechanism is reduced by the adjustment mechanism.

US 3,499,605, Publication date: March 10, 1970

A nozzle and holder for fuel injection on a diesel engine.

Reconsideration and allowance of the claims is courteously solicited.

Respectfully submitted,



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Date: December 9, 2002

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TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.
R.37659

In Re Application Of **RUTHARDT et al**

Serial No
09/844,273

Filing Date
April 30, 2001

Examiner
D. Gorman

Group Art Unit
3752

Title: **COMMON RAIL INJECTOR**

Address to:
Assistant Commissioner for Patents
Washington, D.C. 20231

37 CFR 1.97(b)

1. ☒ The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

37 CFR 1.97(c)

2. ☐ The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:

☐ the statement specified in 37 CFR 1.97(e);

OR

☐ the fee set forth in 37 CFR 1.17(p).

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